

DECLARATION

As a below-named inventor, I hereby declare that:

My correct residence, post office address and citizenship are stated below next to my name.

I believe myself to be the original, first and sole inventor (if only one name is listed below) or an original and first joint inventor (if more than one name is listed below) of the subject matter which is disclosed and claimed and for which a patent is sought on the invention entitled:

OBJECT POSITION DETECTOR WITH EDGE MOTION FEATURE AND GESTURE RECOGNITION

The specification of this subject matter:

☐ is attached hereto.

x was filed on March 28, 1996;

was assigned Serial No. 08/623,483;

which was amended on _____.

I hereby state that I have reviewed and understand the contents of the above identified patent application, including the claims, as amended by any amendment(s) referred to above. I believe the subject matter claimed in the above-identified application to be new and to be unobvious to persons of ordinary skill in the art in view of the prior art of which I am aware. I further hereby state that the specification of the above identified patent application adequately describes how to make and use the claimed invention, and further that it sets forth the best mode for practicing the invention known to me as of the date that the application was filed. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 C.F.R. §1.56(a).

I hereby claim foreign priority benefits under 35 U.S.C. §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Application No.	Country	Filing Date	Priority Claimed
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I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in these prior United States application(s) in the manner provided by 35 U.S.C. §112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application.

Application No.	Filing Date	Status (Issued, Pending, Abandoned)
08/320,158	October 7, 1994	Pending
08/300,387	September 2, 1994	Pending
08/115,743	August 31, 1993	Issued
07/895,934	June 8, 1992	Abandoned

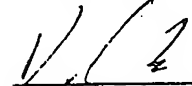
FULL NAME OF INVENTOR 1	FIRST Name	MIDDLE Initial(s)	LAST Name	
	David	W.	Gillespie	
RESIDENCE AND CITY	Palo Alto	California	Canada	
CITIZENSHIP				
POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	220 Ventura Avenue, #8	Palo Alto	California	94306

FULL NAME OF INVENTOR 2	FIRST Name	MIDDLE Initial(s)	LAST Name	
	Timothy	P.	Allen	
RESIDENCE AND CITY	Los Gatos	California	USA	
CITIZENSHIP				
POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	16100 Soda Springs Road	Los Gatos	California	95030

FULL NAME OF INVENTOR 3	FIRST Name	MIDDLE Initial(s)	LAST Name	
	Raph	C.	Wolf	
RESIDENCE AND CITY	Santa Clara	California	Germany	
CITIZENSHIP				
POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	2194 Nobili Avenue	Santa Clara	California	95051

FULL NAME OF INVENTOR 4	FIRST Name	MIDDLE Initial(s)	LAST Name	
	Shawn	P.	Day	
RESIDENCE AND CITY	San Jose	California	Canada	
CITIZENSHIP				
POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	379 Sun River Lane	San Jose	California	95123

I further declare that all statements made herein of my own knowledge are true and that all statements made upon information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

	5-7-96		
Signature of Inventor 1	Date	Signature of Inventor 2	Date

Signature of Inventor 3	Date	Signature of Inventor 4	Date
-------------------------	------	-------------------------	------

FULL NAME OF INVENTOR 1	FIRST Name	MIDDLE Initial(s)	LAST Name	
	David	W.	Gillespie	
RESIDENCE AND CITY	Palo Alto	California	Canada	
CITIZENSHIP				
POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	220 Ventura Avenue, #8	Palo Alto	California	94306

FULL NAME OF INVENTOR 2	FIRST Name	MIDDLE Initial(s)	LAST Name	
	Timothy	P.	Allen	
RESIDENCE AND CITY	Los Gatos	California	USA	
CITIZENSHIP				
POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	16100 Soda Springs Road	Los Gatos	California	95030

FULL NAME OF INVENTOR 3	FIRST Name	MIDDLE Initial(s)	LAST Name	
	Ralph	C.	Wolf	
RESIDENCE AND CITY	Santa Clara	California	Germany	
CITIZENSHIP				
POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
	2194 Nobili Avenue	Santa Clara	California	95051

FULL NAME OF INVENTOR 4	FIRST Name	MIDDLE Initial(s)	LAST Name	
	Shawn	P.	Day	
RESIDENCE AND CITY	San Jose	California	Canada	
CITIZENSHIP				
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Signature of Inventor 1	Date	Signature of Inventor 2	Date
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Signature of Inventor 3	Date	Signature of Inventor 4	Date
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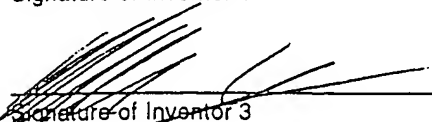
FULL NAME OF INVENTOR 1	FIRST Name	MIDDLE Initial(s)	LAST Name	
	David	W.	Gillespie	
RESIDENCE AND City		State or Foreign Country	Country of Citizenship	
CITIZENSHIP	Palo Alto	California	Canada	
POST OFFICE ADDRESS	Number and Street	City	State or Country	Zip Code
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Signature of Inventor 1	Date	Signature of Inventor 2	Date
	4/15/96		
Signature of Inventor 3	Date	Signature of Inventor 4	Date

FULL NAME OF INVENTOR 1	FIRST Name	MIDDLE Initial(s)	LAST Name	
	David	W.	Gillespie	
RESIDENCE AND CITY	Palo Alto	California	Canada	
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FULL NAME OF INVENTOR 4	FIRST Name	MIDDLE Initial(s)	LAST Name	
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	379 Sun River Lane	San Jose	California	95123

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Inventor 1	Date	Signature of Inventor 2	Date
Inventor 3	Date	Signature of Inventor 4	Date

Shawn Day 5/7/96

POWER OF ATTORNEY

Synaptics, Incorporated, assignee(s) of the application for United States Letters Patent for an invention entitled:

OBJECT POSITION DETECTOR WITH EDGE MOTION FEATURE AND
GESTURE RECOGNITION

invented by:

David W. Gillespie, Timothy P. Allen, Ralph C. Wolf, and Shawn P. Day

☐ executed on even date herewith, or

x having serial No. 08/623,483, filed 3/28/96

do(es) hereby appoint Kenneth D'Alessandro, Registration No. 29,144, David B. Ritchie, Registration No. 31,562, Steven A. Swernofsky, Registration No. 33,040, Jonathan H. Schafer, Registration No. 36,915, Arnold M. de Guzman, Registration No. 39,955, and Steven J. Robbins, Registration No. P 40,299, as attorneys of record with full power of substitution and revocation, to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith, and certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of an assignment from the inventor(s) of the patent application identified above. A copy of which is attached.

Please send all correspondence and direct all telephone calls to:

Kenneth D'Alessandro
D'Alessandro & Ritchie
P.O. Box 640640
San Jose, CA 95164-0640
Telephone (702) 749-5526

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

I, the undersigned, declare that I am the (an) assignee of the above identified application, or, if the assignee is a corporation, partnership, or other association, I am authorized to make this appointment on behalf of the assignee and I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

Full Assignee

Name Synaptics, Incorporated

Post Office

Address 2698 Orchard Parkway, San Jose, California 95134

Signature

James L. Law

Date

6/13/96

Print Name

Title



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SEPTEMBER 17, 1996

PTAS

D'ALESSANDRO & RITCHIE
NICKI KUZN
P.O. BOX 640640
SAN JOSE, CA 95164-0640



100221239A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 06/18/1996

REEL/FRAME: 7999/0354
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

WOLF, RALPH C.

DOC DATE: 04/15/1996

ASSIGNEE:

SYNAPTICS INCORPORATED
2698 ORCHARD PARKWAY
SAN JOSE, CALIFORNIA 95134

SERIAL NUMBER: 08623483

PATENT NUMBER:

FILING DATE: 03/28/1996

ISSUE DATE:

JEEVON JONES, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

06-27-1996

SYN-071

FORM PTO-1595
(Rev. 5-93)

OMB No. 0651-0011 (exp. 4/94)

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100221239

1 SHEET

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

JUN 18 1996

RECEIPT AGENT

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Ralph C. Wolf

MAD 6-18-96

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)

Name: Synaptics Incorporated

Internal Address: _____

Street Address: 2698 Orchard ParkwayCity: San Jose State: CA ZIP: 95134

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other _____Execution Date: April 15, 1996Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

B. Patent No.(s)

08/623,483

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: D'Alessandro & Ritchie

Internal Address: _____

Street Address: P. O. Box 640640City: San Jose State: CA ZIP: 95164-06406. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41).....\$ 40☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number: _____

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Nicki Kuzn

Name of Person Signing

050 TL 06/24/96 08623483

Signature

2 581

6/14/96

48.00 CR

2

Total number of pages including cover sheet, attachments, and document:

ASSIGNMENT

WHEREAS, we, David W. Gillespie, a citizen of the United States of America, residing at 220 Ventura Avenue, #8, Palo Alto, California 94306, Timothy P. Allen, a citizen of the United States of America, residing at 16100 Soda Springs Road, Los Gatos, California 95030, Ralph C. Wolf, a citizen of Germany, residing at 2194 Nobili Avenue, Santa Clara, California 95051, and Shawn P. Day, a citizen of Canada, residing at 379 Sun Ridge Lane, San Jose, California 95123, have invented an "OBJECT POSITION DETECTOR WITH EDGE MOTION FEATURE AND GESTURE RECOGNITION" for which we have executed application papers for a U.S. patent thereon, which was filed on March 28, 1996; and

WHEREAS, Synaptics Incorporated, a California corporation, having a place of business at 2698 Orchard Parkway, San Jose, California 95134, is desirous of acquiring the exclusive right, title and interest in and to said invention and in and to the Letters Patent to be granted and issued therefor in the United States of America and its territories and possessions, and all countries foreign thereto;

NOW, THEREFORE, for a valuable consideration, the receipt of which is hereby acknowledged, we, David W. Gillespie, Timothy P. Allen, Ralph C. Wolf, and Shawn P. Day, do sell, assign, transfer and set over unto the said Synaptics Incorporated, its successors and assigns, the full and exclusive right, title and interest in and to said invention, and in and to any and all Letters Patent to be granted and issued therefor, not only for, to and in the United States of America, its territories and possessions, but also for, to and in all other countries including all priority rights under the International Convention; and we hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said Synaptics Incorporated, its successors and assigns, in accordance with this Assignment.

WITNESS OUR HAND at County of Santa Clara, California, this 15th day of April, 1996.

David W. Gillespie

Timothy P. Allen

Ralph C. Wolf

Shawn P. Day

STATE OF CALIFORNIA

COUNTY OF Santa Clara)
) ss.
)

On this 15th day of April, 1996, before me, Haer R Choi, a Notary Public, personally appeared David W. Gillespie, Timothy P. Allen, Ralph C. Wolf, and Shawn P. Day personally known to me (or proved to me on the basis of satisfactory evidence) to be the person~~s~~ whose name is~~are~~ subscribed to the within instrument and acknowledged to me that he~~she/they~~ executed the same in his~~her/their~~ authorized capacities, and that by his~~her/their~~ signature~~s~~ on the instrument the person~~s~~ or the entity upon behalf of which the person~~s~~ acted, executed the instrument.

WITNESS my hand and official seal.



Haer R Choi
NOTARY PUBLIC



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SEPTEMBER 17, 1996

PTAS



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D'ALESSANDRO & RITCHIE
NICKI KUZN
P.O. BOX 640640
SAN JOSE, CA 95164-0640

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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RECORDATION DATE: 06/18/1996

REEL/FRAME: 7999/0356
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
GILLESPIE, DAVID W.

DOC DATE: 05/07/1996

ASSIGNOR:
ALLEN, TIMOTHY P.

DOC DATE: 05/07/1996

ASSIGNEE:
SYNAPTICS INCORPORATED
2698 ORCHARD PARKWAY
SAN JOSE, CALIFORNIA 95134

SERIAL NUMBER: 08623483
PATENT NUMBER:

FILING DATE: 03/28/1996
ISSUE DATE:

ANNIE HARRELL, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

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06-27-1996



100221238

SYN-071

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

JUN 18 1996

To the Honorable Commissioner of

Please record the attached original document or copy thereof.

1. Name of conveying party(ies):

David W. Gillespie
Timothy P. AllenAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: May 7, 1996

2. Name and address of receiving party(ies)

Name: Synaptics Incorporated

Internal Address:

Street Address: 2698 Orchard Parkway

City: San Jose State: CA ZIP: 95134

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

08/623,483

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: D'Alessandro & Ritchie

Internal Address:

Street Address: P. O. Box 640640

City: San Jose State: CA ZIP: 95164-0640

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$ 40

☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Nicki Kuzn

Name of Person Signing

TL 06/24/96 08623483

Signature

2 581

6/14/96

40.00 CR Date

Total number of pages including cover sheet, attachments, and document: 2

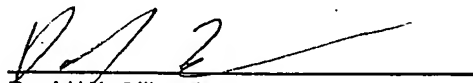
ASSIGNMENT

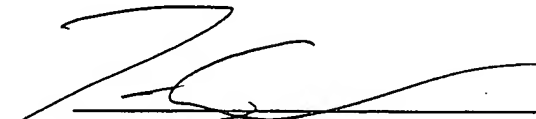
WHEREAS, we, David W. Gillespie, a citizen of the United States of America, residing at 220 Ventura Avenue, #8, Palo Alto, California 94306, Timothy P. Allen, a citizen of the United States of America, residing at 16100 Soda Springs Road, Los Gatos, California 95030, Ralph C. Wolf, a citizen of Germany, residing at 2194 Nobili Avenue, Santa Clara, California 95051, and Shawn P. Day, a citizen of Canada, residing at 379 Sun Ridge Lane, San Jose, California 95123, have invented an "OBJECT POSITION DETECTOR WITH EDGE MOTION FEATURE AND GESTURE RECOGNITION" for which we have executed application papers for a U.S. patent thereon, which was filed on March 28, 1996; and

WHEREAS, Synaptics Incorporated, a California corporation, having a place of business at 2698 Orchard Parkway, San Jose, California 95134, is desirous of acquiring the exclusive right, title and interest in and to said invention and in and to the Letters Patent to be granted and issued therefor in the United States of America and its territories and possessions, and all countries foreign thereto;

NOW, THEREFORE, for a valuable consideration, the receipt of which is hereby acknowledged, we, David W. Gillespie, Timothy P. Allen, Ralph C. Wolf, and Shawn P. Day, do sell, assign, transfer and set over unto the said Synaptics Incorporated, its successors and assigns, the full and exclusive right, title and interest in and to said invention, and in and to any and all Letters Patent to be granted and issued therefor, not only for, to and in the United States of America, its territories and possessions, but also for, to and in all other countries including all priority rights under the International Convention; and we hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said Synaptics Incorporated, its successors and assigns, in accordance with this Assignment.

WITNESS OUR HAND at _____, California, this _____ day of _____, 1996.


David W. Gillespie


Timothy P. Allen

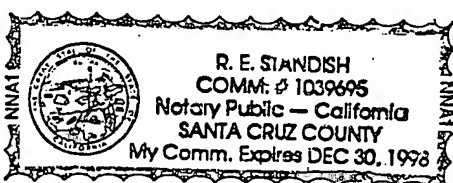
Ralph C. Wolf

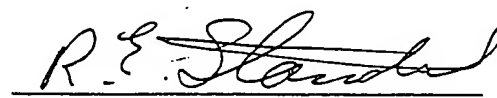
Shawn P. Day

STATE OF CALIFORNIA)
COUNTY OF SANTA CLARA) ss.

On this 7th day of MAY, 1996, before me, R. E. STANDISH, a Notary Public, personally appeared David W. Gillespie, Timothy P. Allen, ~~Ralph C. Wolf~~, and ~~Shawn P. Day~~, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person/s whose name is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacities, and that by his/her/their signature/s on the instrument the person/s or the entity upon behalf of which the person/s acted, executed the instrument.

WITNESS my hand and official seal.




NOTARY PUBLIC



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SEPTEMBER 23, 1996

PTAS

D'ALESSANDRO & RITCHIE
NICKI KUZN
P.O. BOX 640640
SAN JOSE, CA 95164-0640



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UNITED STATES PATENT AND TRADEMARK OFFICE
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RECORDATION DATE: 06/18/1996

REEL/FRAME: 8002/0871
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

ALLEN, TIMOTHY P.

DOC DATE: 05/07/1996

ASSIGNOR:

DAY, SHAWN P.

DOC DATE: 05/07/1996

ASSIGNEE:

SYNAPTICS INCORPORATED
2698 ORCHARD PARKWAY
SAN JOSE, CALIFORNIA 95134

SERIAL NUMBER: 08623483
PATENT NUMBER:

FILING DATE: 03/28/1996
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DIANE RUSSELE, EXAMINER
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COVER SHEET

ONLY

JUN 18 1996

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

RECEIPT ACTING DIV.

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Timothy P. Allen

Shawn P. Day

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies)

Name: Synaptics Incorporated

Internal Address: _____

Street Address: 2698 Orchard ParkwayCity: San Jose State: CA ZIP: 95134

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other: _____Execution Date: May 7, 1996Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s)

08/623,483

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: D'Alessandro & Ritchie

Internal Address: _____

Street Address: P. O. Box 640640City: San Jose State: CA ZIP: 95164-

0640

6. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41).....\$ 40☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number: _____

(Attach duplicate copy of this page if paying by deposit account)

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Nicki Kuzn

Name of Person Signing

Nicki Kuzn

Signature

2 581

6/14/96

40.00 CK

Date

050 TL 06/24/96 08623483
Total number of pages including cover sheet, attachments, and document: 2

ASSIGNMENT

WHEREAS, we, David W. Gillespie, a citizen of the United States of America, residing at 220 Ventura Avenue, #8, Palo Alto, California 94306, Timothy P. Allen, a citizen of the United States of America, residing at 16100 Soda Springs Road, Los Gatos, California 95030, Ralph C. Wolf, a citizen of Germany, residing at 2194 Nobili Avenue, Santa Clara, California 95051, and Shawn P. Day, a citizen of Canada, residing at 379 Sun Ridge Lane, San Jose, California 95123, have invented an "OBJECT POSITION DETECTOR WITH EDGE MOTION FEATURE AND GESTURE RECOGNITION" for which we have executed application papers for a U.S. patent thereon, which was filed on March 28, 1996; and

WHEREAS, Synaptics Incorporated, a California corporation, having a place of business at 2698 Orchard Parkway, San Jose, California 95134, is desirous of acquiring the exclusive right, title and interest in and to said invention and in and to the Letters Patent to be granted and issued therefor in the United States of America and its territories and possessions, and all countries foreign thereto;

NOW, THEREFORE, for a valuable consideration, the receipt of which is hereby acknowledged, we, David W. Gillespie, Timothy P. Allen, Ralph C. Wolf, and Shawn P. Day, do sell, assign, transfer and set over unto the said Synaptics Incorporated, its successors and assigns, the full and exclusive right, title and interest in and to said invention, and in and to any and all Letters Patent to be granted and issued therefor, not only for, to and in the United States of America, its territories and possessions, but also for, to and in all other countries including all priority rights under the International Convention; and we hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said Synaptics Incorporated, its successors and assigns, in accordance with this Assignment.

WITNESS OUR HAND at SAN JOSE, California, this 7TH day of MAY, 1996.

David W. Gillespie

Timothy P. Allen

Ralph C. Wolf

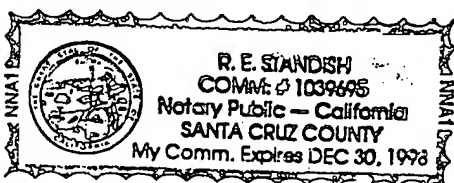
Shawn P. Day

STATE OF CALIFORNIA)

COUNTY OF SANTA CLARA) ss.

On this 7TH day of MAY, 1996, before me, R.E. STANDISH, a Notary Public, personally appeared David W. Gillespie, Timothy P. Allen, Ralph C. Wolf, and Shawn P. Day, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person/s whose name is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacities, and that by his/her/their signature/s on the instrument the person/s or the entity upon behalf of which the person/s acted, executed the instrument.

WITNESS my hand and official seal.



R.E. Standish
NOTARY PUBLIC